

### **REMARKS**

This responds to the Office Action mailed on July 29, 2005.

No claims are amended, no claims are canceled, and no claims are added; as a result, claims 1-50 are now pending in this application. Applicant respectfully requests reconsideration of the above-identified application in view of the remarks that follow.

#### **Information Disclosure Statement**

Applicant submitted an Information Disclosure Statement and a 1449 Form on February 14, 2000. The Form 1449 was returned with the previous Office Action dated August 26, 2004 but was only partially initialed. The first 4 references were not initialed. Applicant has enclosed a courtesy copy of the partially initialed Form 1449. Applicant respectfully requests all references to be initialed and a copy of the 1449 Form be returned to Applicant's Representatives to indicate that the cited references have been considered by the Examiner.

#### **Provisional Double Patenting Rejection**

Claims 1-50 were rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-49 of co-pending U.S. Application No. 10/731,915.

Since co-pending U.S. Application No. 10/732,915 has not issued as a patent, Applicant requests withdrawal of these rejections of claims 1-50 and allowance of these claims.

#### **§102 Rejection of the Claims**

Claims 1, 2 and 8 were rejected under 35 U.S.C. § 102(e) for anticipation by Kandel (U.S. 6,353,671). Applicant traverses these grounds for rejection of these claims.

Applicant reserves the right to swear behind Kandel at a later date.

Applicant cannot find in Kandel a disclosure, a teaching, or a suggestion of a method including adjusting a feedback-inhibiting filter using a narrowband subaudible probe signal as recited in claim 1. In the Office Action, it is stated that "Kandel discloses ... inhibiting at least one feedback component of an input audio signal by adjusting a feed back-inhibiting filter (Fig. 4; column 5, line 57 to column 6, line 5; column 9, lines 50-57) using a narrowband subaudible probe signal (Fig. 4; column 6, lines 19-24; column 10, lines 12-25; column 12, lines 1-4)."

However, specificity as to which portions of the cited sections of Kandel allegedly show the elements of claim 1 has not been provided in the Office Action. Kandel inserts a tone to be mixed with an audio signal that is fed back through a loudspeaker 117, a sensor 118, a processing filter 120, an airpath 117A and a microphone 112. Processing filter 120 acts on the received tone. However, Applicant cannot find in Kandel where processing filter 120 is adjusted by the received signal. Processing filter 120 processing a signal does not teach or disclose adjusting processing filter 120 using a subaudible narrowband probe signal. Therefore, since Kandel does not teach each and every claim element arranged as in claim 1, Applicant submits that Kandel does not anticipate claim 1. Thus, Applicant submits that claim 1 is patentable over Kandel for at least the reasons stated above.

Applicant cannot find in Kandel a disclosure, a teaching, or a suggestion of a method including filtering a processed signal by a notch filter to form a filtered signal as recited in claim 2. In the Office Action, it is stated that "Kandel discloses ... filtering a processed signal by a notch filter to form a filtered signal (Fig. 4; column 10, lines 12-25; column 11, lines 5-11)." Applicant cannot find in this referenced section or other sections of Kandel a disclosure, a teaching, or a suggestion of a notch filter. Therefore, since Kandel does not teach each and every claim element arranged as in claim 2, Applicant submits that Kandel does not anticipate claim 2. Thus, Applicant submits that claim 2 is patentable over Kandel for at least the reasons stated above.

Applicant cannot find in Kandel a disclosure, a teaching, or a suggestion of a system including at least one notch filter as recited in claim 8. In the Office Action, it is stated that "Kandel discloses ... at least one notch filter to filter a processed signal (Fig. 4; column 10, lines 12-25; column 11, lines 5-11)." Applicant cannot find in this referenced section or other sections of Kandel a disclosure, a teaching, or a suggestion of a notch filter. Therefore, since Kandel does not teach each and every claim element arranged as in claim 8, Applicant submits that Kandel does not anticipate claim 8. Thus, Applicant submits that claim 8 is patentable over Kandel for at least the reasons stated above.

Applicant respectfully requests withdrawal of these rejections of claims 1, 2 and 8, and reconsideration and allowance of these claims.

First §103 Rejection of the Claims

Claims 1, 2, 5, 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Goodings et al. (U.S. 5,259,033) in view of Kuo (U.S. 6,097,823). Applicant traverses these grounds for rejection of these claims for at the least the reasons made of record.

Applicant reserves the right to swear behind Kuo at a later date.

Applicant cannot find in the combination of Goodings et al. (hereafter Goodings) and Kuo a teaching or a suggestion of a method including inhibiting at least one feedback component of an input audio signal by adjusting a feedback-inhibiting filter using a narrowband subaudible probe signal as recited in claim 1. In the Office Action, it is alleged that a chirp signal of Kuo may be used in Goodings where “a chirp signal is an equivalent probe signal wherein at an instantaneous moment it is a narrow band signal.” However, Applicant cannot find in the combination of Goodings and Kuo a teaching or a suggestion of using an instantaneous moment of a chirp signal as a narrowband probe signal. As recited in the instant claim 1, the probe signal itself is narrowband. A chirp signal made of numerous instantaneous moments does not make the chirp signal itself narrowband *per se*. The combination of Goodings and Kuo appears to be void of a teaching or a suggestion of a narrowband signal. The proposed modification of the combination of Goodings and Kuo is provided in the Office Action without a teaching or a suggestion for this modification found in the combination of Gooding and Kuo. Thus, the combination of Goodings and Kuo does not teach or suggest all the elements of claim 1.

It is noted that “[a]ny judgement on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant’s disclosure, such a reconstruction is proper.” *In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971). However, no reference or objective evidence has been provided in the Office Action to use an instantaneous moment of a chirp signal in the proposed combination of references as proffered in the Office Action. Applicant submits that, without such reference or objective evidence to support the Office Action modification of Goodings and Kuo, application of the Office Action modification to establish a *prima facie* case of obviousness with respect to claim 1 is not proper. *See, in re Sang Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). Applicant submits

that the use of a narrowband probe signal, as recited in claim 1, has only been provided in the Applicant's disclosure.

In the Office Action, it is stated that "Applicant has not clearly defined a 'narrowband subaudible probe signal' in the claim." Applicant submits that the definition of a term need not be stated in a claim, but rather the issue is whether one skilled in the art can understand the terms of a claim in light of the specification. Further, in the Office Action it is stated that a probe signal may be "multiple instantaneous moment of a chirp signal." However, if a probe signal is multiple instantaneous moments of a chirp signal, then the probe chirp signal itself is not *per se* a narrowband signal. Kuo (cited with respect to a chirp signal) uses the chirp signal and not an instantaneous moment processed from the chirp signal as a signal. In addition, Applicant cannot find in the combination of Goodings and Kuo a teaching or suggestion regarding how to generate, from Kuo's chirp signal, an instantaneous moment signal as a narrowband signal.

Thus, Applicant submits that claim 1 is patentable over Gooding in view of Kuo for at least the reasons stated herein. For at least reasons similar to those discussed above with respect to claim 1, Applicant submits that claim 2 is patentable over Goodings in view of Kuo. Claims 5-7 depend on claim 2 and are patentable over Goodings in view of Kuo for at least the reasons stated above with respect to claim 2.

Applicant respectfully requests withdrawal of these rejections of claims 1, 2, 5, 6, and 7, and reconsideration and allowance of these claims.

#### Second §103 Rejection of the Claims

Claims 8, 14, 16, 17, 19, 20 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Goodings et al. in view of Kuo as applied to claims 1, 2, 5, 6 and 7 above, and further in view of Kates ("Feedback Cancellation in Hearing Aids: Results from a Computer Simulation"). Applicant traverses these grounds for rejection of these claims for at the least the reasons made of record.

Applicant cannot find in the combination of Goodings, Kuo, and Kates a teaching or a suggestion of a probe generator to generate a probe signal, the probe signal and a filtered signal used to probe a feedback path with a narrowband subaudible audio probe signal as recited in claim 8. In the Office Action, it is alleged that a chirp signal of Kuo may be used in Goodings

where “a chirp signal is an equivalent probe signal wherein at an instantaneous moment it is a narrow band signal.” However, Applicant cannot find in the combination of Goodings, Kuo, and Kates a teaching or a suggestion of using an instantaneous moment of a chirp signal as a narrowband probe signal. As recited in the instant claim 8, the probe signal itself is narrowband. A chirp signal made of numerous instantaneous moments does not make the chirp signal itself narrowband *per se*. Thus, the combination of Goodings, Kuo, and Kates appears to be void of a teaching or suggest of a narrowband signal as recited in claim 8. The proposed modification of the combination of Goodings, Kuo, and Kates is provided in the Office Action without a teaching or suggestion for this modification found in the combination of Gooding, Kuo, and Kates. Therefore, the combination of Goodings, Kuo, and Kates does not teach or suggest all the elements of 8.

Thus, Applicant submits that claim 8 is patentable over Goodings in view of Kuo and in further view of Kates for at least the reasons stated herein. Claims 14, 16, 17, and 19-21 depend on claim 8 and are patentable over Goodings in view of Kuo in further view of Kates for at least the reasons stated above with respect to claim 8.

Applicant respectfully requests withdrawal of these rejections of claims 8, 14, 16, 17, 19, 20 and 21, and reconsideration and allowance of these claims.

#### Third §103 Rejection of the Claims

Claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Goodings et al. in view of Kuo as applied to claims 1, 2, 5, 6 and 7 above, and further in view of Kates, and Thurmond et al. (U.S. 4,088,835). Applicant traverses these grounds for rejection of these claims for at the least the reasons made of record.

Thurmond et al. (hereafter Thurmond) is applied in the Office Claim to instant claim 18 with respect to a compressive amplifier. Applicant submits that Thurmond does not cure the deficiencies of applying Goodings, Kuo, and Kates to claim 8, and, therefore, claim 8 is patentable over Goodings in view of Kuo and further in view of Kates and Thurmond for at least the reasons stated above with respect to claim 8. Claim 18 depends from claim 8 and is patentable over Goodings in view of Kuo and further in view of Kates and Thurmond for at least the reasons stated above with respect to claim 8.

Applicant respectfully requests withdrawal of these rejections of claim 18, and reconsideration and allowance of this claim.

*Fourth §103 Rejection of the Claims*

Claims 1, 2, 3, 4, 8, 9, 10, 20, 22, 23 and 40 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kates in view of Kuo. Applicant traverses these grounds for rejection of these claims for at the least the reasons made of record.

Applicant cannot find in the combination of Kates and Kuo a teaching or a suggestion of a method including inhibiting at least one feedback component of an input audio signal by adjusting a feedback-inhibiting filter using a narrowband subaudible probe signal as recited in claim 1. In the Office Action, it is alleged that a chirp signal of Kuo may be used in Kates where “a chirp signal is an equivalent probe signal wherein at an instantaneous moment it is a narrow band signal.” However, Applicant cannot find in the combination of Kates and Kuo a teaching or a suggestion of using an instantaneous moment of a chirp signal as a narrowband probe signal. As recited in the instant claim 1, the probe signal itself is narrowband. A chirp signal made of numerous instantaneous moments does not make the chirp signal itself narrowband *per se*. The combination of Kates and Kuo appears to be void of a teaching or suggest of a narrowband signal as recited in claim 1. The proposed modification of the combination of Kates and Kuo is provided in the Office Action without a teaching or suggestion for this modification found in the combination of Kates and Kuo. Thus, the combination of Kates and Kuo does not teach or suggest all the elements of claim 1.

It is noted that “[a]ny judgement on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant’s disclosure, such a reconstruction is proper.” *In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971). However, no reference or objective evidence has been provided in the Office Action to use an instantaneous moment of a chirp signal in the proposed combination of references as proffered in the Office Action. Applicant submits that, without such reference or objective evidence to support the Office Action modification of Kates and Kuo, application of the Office Action

modification to establish a *prima facie* case of obviousness with respect to claim 1 is not proper. *See, in re Sang Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). Applicant submits that the use of a narrowband probe signal, as recited in claim 1, has only been provided in the Applicant's disclosure.

For at least reasons similar to those discussed above with respect to claim 1, Applicant submits that claims 2 and 8 are patentable over Kates in view of Kuo. Claims 3 and 4 and claims 9, 10, 20, 22, 23, and 40 depend on claims 2 and 8, respectively, and are patentable over Kates in view of Kuo for at least the reasons stated above.

Applicant respectfully requests withdrawal of these rejections of claims 1, 2, 3, 4, 8, 9, 10, 20, 22, 23 and 40, and reconsideration and allowance of these claims.

#### Fifth §103 Rejection of the Claims

Claims 2, 8, 11, 12, 13 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Finn et al. (U.S. 6,496,581) in view of Goodings et al., and further in view of Kuo. Applicant traverses these grounds for rejection of these claims for at the least the reasons made of record.

Applicant reserves the right to swear behind Finn et al. (hereafter Finn) at a later date.

Applicant cannot find in the combination of Finn, Goodings, and Kuo a teaching or a suggestion of a method including sending a subaudible narrowband signal having a first bandwidth into a filtered signal to form a probe signal to probe a feedback path having a second bandwidth as recited in claim 2. In the Office Action, it is alleged that a chirp signal of Kuo may be used in Gooding where "a chirp signal is an equivalent probe signal wherein at an instantaneous moment it is a narrow band signal." However, Applicant cannot find in the combination of Finn, Goodings, and Kuo a teaching or a suggestion of using an instantaneous moment of a chirp signal as a narrowband signal. As recited in the instant claim 2, a subaudible narrowband signal itself is narrowband. A chirp signal made of numerous instantaneous moments does not make the chirp signal itself narrowband *per se*. The combination of Finn, Goodings, and Kuo appears to be void of a teaching or suggest of a narrowband signal used as recited in claim 2. The proposed modification of the combination of Finn, Goodings, and Kuo is provided in the Office Action without a teaching or suggestion for this modification found in the

combination of Finn, Goodings, and Kuo. Therefore, the combination of Finn, Goodings, and Kuo does not teach or suggest all the elements of 2.

It is noted that “[a]ny judgement on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant’s disclosure, such a reconstruction is proper.” *In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971). However, no reference or objective evidence has been provided in the Office Action to use an instantaneous moment of a chirp signal in the proposed combination of references as proffered in the Office Action. Applicant submits that, without such reference or objective evidence to support the Office Action modification of Finn, Goodings, and Kuo, application of the Office Action modification to establish a *prima facie* case of obviousness with respect to claim 2 is not proper. *See, in re Sang Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). Applicant submits that the use of a narrowband signal, as recited in claim 2, has only been provided in the Applicant’s disclosure.

Thus, Applicant submits that claim 2 is patentable over Finn in view of Goodings in further view of Kuo for at least the reasons stated herein. Applicant submits that claim 8 is patentable over Finn in view of Goodings in further view of Kuo for at least reasons similar to those stated above with respect to claim 2. Claims 11-13 and 15 depend on claim 8 and are patentable over Finn in view of Goodings in further view of Kuo for at least the reasons stated above.

Applicant respectfully requests withdrawal of these rejections of claims 2, 8, 11, 12, 13 and 15, and reconsideration and allowance of these claims.

#### Objections to the Claims

Claim 46 was objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 46 depends on patentable claim 8 and, therefore, is patentable for at least the reasons discussed herein with respect to claim 8.

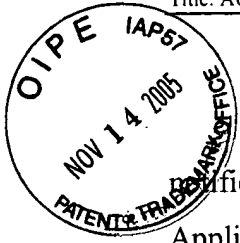


Applicant respectfully requests withdrawal of these objections of claim 46, and reconsideration and allowance of this claim.

*Allowable Subject Matter*

Claims 24-39, 41-45 and 47-50 were indicated to be allowable if Applicant overcomes the Double Patenting rejection set forth in the Office Action.

Since U.S. Application No. 10/732,915 is co-pending and is not an issued patent, Applicant respectfully requests allowance of claims 24-39, 41-45 and 47-50.



CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and no further modification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 371-2157 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date 9 November 2005 By David R. Cochran  
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 9 day of November, 2005.

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